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Brian A. Batke

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ROCKWELL AUTOMATION, INC./BF
ATTENTION: SUSAN M. DONAHUE, E-7F19
1201 SOUTH SECOND STREET
MILWAUKEE, WI 53204

EXAMINER

RECEK, JASON D

ART UNIT

PAPER NUMBER

2442

NOTIFICATION DATE

DELIVERY MODE

09/17/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@boylefred.com
smdonahue@ra.rockwell.com

Office Action Summary	Application No. 09/964,916	Applicant(s) BATKE ET AL.	
	Examiner JASON RECEK	Art Unit 2442	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 16 March 2009.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-23 is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-23 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

This is in response to the RCE filed on March 16th 2009.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/30/08 has been entered.

Status of Claims

Claims 1-23 are pending but currently rejected under 35 U.S.C. 103(a).

Claims 18 and 21-23 are currently rejected under 35 U.S.C. 101.

Response to Arguments

2. Applicant's arguments, see pg. 8-9, with respect to the rejection(s) of claim(s) 1, 18 under 103(a) have been fully considered and are persuasive. Specifically, the argument that Thibault and Stawikowski do not disclose "the network signal is ... transmitted according to a protocol of the control network and not ... transmitted in

accordance with any Internet [protocol]" as now recited by claims 1 and 18 is persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Stevens US 6,324,583 B1.

3. Applicant's arguments, see pg. 9-11, with respect to the rejection(s) of claim(s) 21 under 103(a) have been fully considered and are persuasive. Specifically, the argument that Thibault, Stawikowski and Kastner do not teach two distinct communication stacks (i.e. TCP stack and control network protocol stack) as recited by the claim is persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Stevens.

4. Applicant's arguments regarding the dependent claims present the same reasoning and are therefore also persuasive for similar reasons.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 18 and 21-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 18, it is directed towards an interface which is not one of the four statutory categories of invention. Since the claim contains "means for" language it

must be interpreted in light of the specification. The specification contains nothing that would limit the means to hardware (which would render the claim a machine or manufacture), for example on pg. 7 the specification only makes general statements about the function of the interface. On pg. 8 the specification indicates the interface may be a PLC but this is not required. In light of the specification this claim covers an embodiment which is solely a computer program. Programs per se are not patentable subject matter (claims 18 and 19 are statutory because they require a physical hardware port).

Regarding claim 21, it is a method claim and thus must satisfy the machine or transformation test as described in Bilski. Claim 21 does not recite any particular machine. Although the claim recites receiving and transmitting signals to various devices, this "device" does not impose meaningful limits on the claim's scope and is merely a field of use limitation. The claim also does not require any particular transformation. The method involves handling a protocol and formatting a signal. However, formatting a signal is not a particular transformation of a particular article because a signal is not a tangible article. Therefore, claim 21 is not statutory. Claims 22-23 do not recite any additional limitations that would render the claims statutory. Therefore, they are rejected based on their dependency.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 8, 14-19 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thibault in view of Stawikowski and Stevens US 6,324,583 B1.

Regarding claims 1 and 18, Thibault discloses an industrial control system for controlling an industrial process comprising:

a plurality of control devices each of which contributes to the controlling of the controlled process (col. 3, line 60); a web access interface (fig. 1, item 16) including an Internet interface (fig. 1, item 25a) and a control network interface (fig. 1, item 25b) wherein the control network interface is coupled to the plurality of control devices by way of a network (fig. 1, item 30), and wherein the Internet interface is capable of being coupled to a remote device (fig. 1, item 12) via the Internet (col. 4, lines 33-34), the web access interface executing: an Internet communications program (fig. 1, item 25a) executing on the web access interface that receives an Internet signal from the internet having socket API data and formatted in accordance with a TCP/IP protocol, wherein the Internet communications program extracts the socket API data from the Internet signal and provides a socket API signal including the socket API data (col. 6, lines 50-

53); and a control network communications program (fig. 1, item 25b; col. 7, lines 1-2) that receives the socket API signal and transmits a network signal based upon the socket API signal to an appropriate one of the control devices in accordance with the Internet signal, wherein the socket API data is included within the network signal and processed at the one of the control devices (col. 6, lines 47-49).

Thibault does not explicitly teach that the control devices contribute by communicating data over a control network using a control network protocol. However, Stawikowski discloses: "The communications system is based on the Simple Object Access Protocol (SOAP)," (paragraph [0007] on page 1). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize a control network protocol for communicating data over the control network. The communications system is based on SOAP... "for the purpose of providing the remote device with supervision, display, control, configuration or programming functions of the automation equipment," (paragraph [0007] on page 1 in Stawikowski). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the control devices contribute by communicating data over a control network using a control network protocol in the system as taught by Thibault.

Thibault does not explicitly teach that each control device includes a respective web server program and that the network signal is formatted according to a protocol of the control network and not formatted in accordance with any Internet transport layer protocol and any Internet network layer protocol. Stawikowski teaches that automation equipment can include a web server to exchange (process) data (par. 3, lines 1-3; par.

19, lines 10-11). Stawikowski also teaches that the SOAP protocol can be used between automation equipment and control devices (paragraph [0007] on page 1). Thibault and Stawikowski are analogous art because they are both from the same field of endeavor of networked automation equipment. At the time of invention it would have been obvious to one of ordinary skill in the art to modify Thibault's system by allowing each process control apparatus and the server digital data processor to include a web server and format the network signal in accordance to a protocol of the control network and not in accordance with any internet transport or network layer protocol, as taught by Stawikowski. The motivation for doing so would have been to allow each process control apparatus to exchange data with the server digital data processor in a web-based fashion (par. 3, lines 2-4) and to provide the remote device with supervision, display, *control*, configuration or programming functions of the automation equipment (paragraph [0007] on page 1). It would also have been obvious to modify Thibault's system to use UDP/IP between the object manager and the control apparatus, as taught by Stawikowski. Therefore it would have been obvious to combine Stawikowski and Thibault for the benefit of web-based data exchange, less network overhead, and to provide the remote device with supervision, display, *control*, configuration or programming functions of the automation equipment to obtain the invention as specified in claim 1.

The combination of Thibault and Stawikowski does not explicitly disclose "the network signal is ... transmitted according to a protocol of the control network and not ... transmitted in accordance with any Internet transport layer [or network layer

protocol]” however this is taught by Stevens as transmitting a signal in a protocol other than TCP/IP, including any type of dissimilar network protocol (Fig. 2, col. 2 ln. 25-27, col. 3 ln. 15-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Thibault and Stawikowski with the teaching of Stevens for the purpose of communicating with different devices. It is well known in the art to provide nodes with the functionality to handle different protocols (Stevens col. 1 ln. 1—23). Thus this is merely the combination of known elements according to their established function in order to yield predictable results.

Regarding claim 2, Thibault discloses that the control network communications program further receives an additional network signal from another of the control devices and provides an additional socket API signal based upon the additional network signal, wherein both the additional network signal and the additional socket API signal include application-level information; and wherein the Internet communications program receives the additional socket API signal and formats the additional socket API signal in accordance with the TCP/IP protocol for transmission over the Internet to an additional remote device (col. 6, lines 53-56).

Regarding claim 3, Thibault does not explicitly disclose that the control communications module encodes the socket API data from the socket API signal with a second protocol different from the TCP/IP protocol, whereby the control devices

can provide web functionality without the overhead of a TCP/IP stack. Stawikowski teaches that the UDP/IP protocol can be used between automation equipment and control devices. Thibault and Stawikowski are analogous art because they are both from the same field of endeavor of networked automation equipment. At the time of invention, it would have been obvious to modify Thibault's system to use UDP/IP between the object manager and the control apparatus, as taught by Stawikowski. The motivation for doing this would have been to have less network overhead. Therefore it would have been obvious to combine Stawikowski and Thibault for the benefit of web-based data exchange and less network overhead to obtain the invention as specified in claim 3.

Regarding claim 8, Thibault does not explicitly disclose that the web server implements at least one of an HTTP, an FTP, an SMTP, a Telnet command, a DNS command, and a WINS command based upon the socket API data.

Stawikowski teaches that a web server used in automation equipment can use an HTTP command (par. 25, lines 1-4).

Thibault and Stawikowski are analogous art because they are both from the same field of endeavor of networked automation equipment. At the time of invention, it would have been obvious to one of ordinary skill in the art that if Thibault's system is modified as described in claim 1 to utilize web servers, one could also modify Thibault's system to use an HTTP command, as taught by Stawikowski. The motivation for doing

so would have been to allow Thibault's system to exchange web-based data. Therefore, it would have been obvious to combine Thibault with Stawikowski for the benefit of exchanging web-based data to obtain the invention as specified in claim 8.

Regarding claim 14, Thibault discloses that the Internet communications program and the control network communications program are comprised within a single translation module (fig. 1, item 16).

Regarding claims 15 and 16, Thibault does not explicitly disclose that the control devices are control nodes each including a respective processor and that the respective processors are programmable logic controllers. However, Stawikowski teaches that programmable logic controllers can be used as automation equipment in a remote process control system (par. 2, lines 1-2).

Thibault and Stawikowski are analogous art because they are both from the same field of endeavor of networked automation equipment. At the time of invention, it would have been obvious to one of ordinary skill in the art to modify Thibault's system by allowing the specified process control apparatus to be a programmable logic controller, as taught by Stawikowski. The motivation for doing so would have been to allow Thibault's system to have a process control apparatus that can run a program in order to provide additional automation functions (par. 2, lines 6-8). Therefore, it would

have been obvious to combine Thibault with Stawikowski for the benefit of additional automation functions to obtain the invention as specified in claims 15 and 16.

Regarding claim 17, Thibault discloses that the control devices are I/O modules including processing devices (col. 3, lines 66-67 - col. 4, lines 1-2), and the web access interface includes a programmable logic controller (col. 4, lines 17-19).

Regarding claim 19, Thibault discloses that the second means includes at least one port, and wherein the one port includes at least one communication link coupling the port with one of the control devices (fig. 1, items 25c, 30, and 23a).

Regarding claim 21, Thibault discloses a method of communicating information between a plurality of control devices (col. 3, line 60) within an industrial control system and a remote device (fig. 1, item 12) coupled to the industrial control system by way of the Internet (fig. 1, item 18; col. 4, lines 33-34), the method comprising: receiving a request signal (col. 6, lines 46-47) at a web access interface (fig. 1, item 16), wherein the request signal has been provided over the Internet (col. 4, lines 33-34) from the remote device (fig. 1, item 12); processing a TCP/IP protocol with respect to the request signal by way of an Internet communications program (fig. 1, item

25a) of the web access interface, in order to extract socket API data in the form of a socket API signal (col. 6, lines 50-53); determining an appropriate destination control device from among the plurality of control devices (col. 6, lines 27-33); and delivering the network signal to the appropriate destination control device so that the socket API data can be processed by the respective web server program (col. 5, lines 49-50). Thibault does not explicitly disclose that each of the control devices has a respective web server program. Stawikowski teaches that automation equipment can include a web server to exchange (process) data (par. 3, lines 1-3; par. 19, lines 10-11).

Thibault and Stawikowski are analogous art because they are from the same field of endeavor of remote industrial control systems. At the time of invention it would have been obvious to one of ordinary skill in the art to modify Thibault's system by allowing each process control apparatus and the server digital data processor to include a web server, as taught by Stawikowski. The motivation for doing so would have been to allow each process control apparatus to exchange data with the server digital data processor in a web-based fashion (par. 3, lines 2-4).

Thibault and Stawikowski do not explicitly disclose that the method comprises "processing an Internet media access control protocol and a TCP/IP protocol" and "formatting the socket API signal in accordance with a control network protocol and an internal media access control protocol to produce a network signal". However these features are taught or suggested by Stevens as transmitting a signal in a protocol other than TCP/IP (Stevens does not explicitly teach MAC protocol however as stated by applicants on pg. 10 of the arguments this protocol is well known in the data link layer

which disclosed by Stevens), including any type of dissimilar network protocol (Fig. 2, col. 2 ln. 25-27, col. 3 ln. 15-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination of Thibault and Stawikowski with the teaching of Stevens for the purpose of communicating with different devices. It is well known in the art to provide nodes with the functionality to handle different protocols (Stevens col. 1 ln. 1-23). Thus, this is merely the combination of known elements according to their established function in order to yield predictable results.

Regarding claim 22, Thibault discloses providing an additional network signal from one of the plurality of control devices to the web access interface, wherein the additional network signal includes additional socket API data; processing the additional network signal with respect to the control network protocol and the internal media access control protocol to produce an additional socket API signal; formatting the additional socket API signal in accordance with the TCP/IP protocol and the Internet media access control protocol to generate an Internet signal; and providing the Internet signal onto the Internet for transmission to an additional remote device (col. 6, lines 53-56).

Regarding claim 23, Thibault discloses that the Internet signal is transmitted as a series of separate data packets (col. 6, line 51).

8. Claims 4-7, 9, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thibault in view of Stawikowski and Stevens as applied to claims 1, 18, and 19 above, and further in view of Kastner.

Regarding claims 4 and 5, Thibault and Stawikowski do not explicitly disclose that the Internet communications program includes a first software program for processing an Internet media access control protocol with respect to the Internet signal and that the Internet media access control protocol is one of an Ethernet protocol, a Token Ring, protocol, a FDDI protocol, an ATM protocol, a SONET protocol, an X.25 protocol, and a frame relay protocol. However, Kastner teaches that Ethernet can be used to communicate between two computing devices (col. 6, lines 1-5). Thibault, Stawikowski, and Kastner are all analogous art because they are from the same field of endeavor of remote industrial control systems. At the time of invention, it would have been obvious to one of ordinary skill in the art to modify Thibault and Stawikowski's system to use Ethernet to communicate between the client and command processor, as taught by Kastner. The motivation for doing so would have been to enable Thibault and Stawikowski's system to use standard Ethernet components that are widely available (col. 6, lines 6-8). Therefore it would have been obvious to combine Kastner with Thibault and Stawikowski for the benefit of widely available standard components to obtain the invention as specified in claims 4 and 5.

Regarding claim 6, Thibault discloses that the Internet communications program includes a second software program for processing an IP protocol with respect to the Internet signal, wherein the processing includes obtaining an IP address (col. 6, lines 50-53). If IP is being used, it is inherent that an IP address is being obtained because both the source and destination IP addresses are contained in the header of an IP packet (Stevens, page 34, fig. 3.1).

Regarding claim 7, Thibault discloses that the Internet communications program includes a third software program for processing a TCP protocol with respect to the Internet signal (col. 4, lines 43-47).

Regarding claim 9, Thibault and Stawikowski do not explicitly disclose that the control network communications program includes a first program for formatting the socket API signal in accordance with an internal media access protocol.

Kastner teaches that an Ethernet protocol can be used to communicate signals between a control device and an operating unit (col. 6, lines 1-5). Thibault, Stawikowski, and Kastner are all analogous art because they are from the same field of endeavor of remote industrial control systems. At the time of invention it would have been obvious to one of ordinary skill in the art to modify Thibault and Stawikowski's

system to utilize Ethernet for communication between the process control apparatus and the object manager, as taught by Kastner. The motivation for doing so would have been to be able to use standard Ethernet equipment that is readily available (col. 6, lines 6-8). Therefore, it would have been obvious to combine Kastner with Thibault and Stawikowski for the benefit of standard equipment that is readily available to obtain the inventions specified in claim 9.

Regarding claim 20, Thibault discloses that the third means includes programs allowing for processing and formatting in accordance with an Internet communications protocol (col. 4, lines 43-47).

Thibault and Stawikowski do not explicitly disclose that the set of programs allows for processing and formatting in accordance with an Internet media access control protocol, a control network protocol, and an internal media access control protocol. Kastner teaches that Ethernet can be used to communicate between two computing devices (col. 6, lines 1-5), that HTTP can be used to transmit information between a control device and an operating unit (col. 6, lines 64-66), and that Ethernet can be used to communicate signals between a control device and an operating unit (col. 6, lines 1-5). Thibault, Stawikowski, and Kastner are all analogous art because they are from the same field of endeavor of remote industrial control systems. At the time of invention, it would have been obvious to modify Thibault and Stawikowski's system to use Ethernet to communicate between the client and the command processor, as taught by Kastner. The motivation for doing so would have been to

enable Thibault and Stawikowski's system to utilize standard Ethernet components that are readily available (col. 6, lines 6-8). At the time of invention, it would have been obvious to modify Thibault and Stawikowski's system to use HTTP to communicate between the control apparatus and the object manager, as taught by Kastner. The motivation for doing so would have been to allow Thibault and Stawikowski's system to exchange web-based data. At the time of invention, it would have been obvious to one of ordinary skill in the art to modify Thibault and Stawikowski's system to utilize Ethernet for communications between the process control apparatus and the object manager, as taught by Kastner. The motivation for doing so would have been to enable Thibault and Stawikowski's system to use standard Ethernet equipment that is readily available (col. 6, lines 6-8). Therefore it would have been obvious to combine Kastner with Thibault and Stawikowski for the benefit of standard components and the ability to exchange web-based data to obtain the invention as specified in claim 20.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thibault in view of Stawikowski, Stevens and Keeley (U.S. 5,966,519).

Claim 10 is a system claim that is substantially similar to the system of claim 1, those similar portions are rejected for the same reasons.

The combination of Thibault, Stawikowski and Stevens does not explicitly disclose that the internal media access control protocol is selected from a group consisting of a DeviceNet protocol and a ControlNet protocol. However, Keeley

discloses: "A number of different communication links are commonly used in industrial controllers including proprietary links defined and used by a particular manufacturer and open links such as ControlNet, DeviceNet and Ethernet whose specifications are published and may be used broadly by a number of manufacturers and suppliers," (lines 24-29 of column 1). It would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to have the internal media access control protocol selected from a group consisting of a DeviceNet protocol and a ControlNet protocol. "The communication links differ in physical aspects, for example, the type of media (e.g., co-axial cable, twisted pair, light fiber, etc.) as well as the electrical details of its operation, (e.g., baud rate, number of channels, word transmission size, etc.). At a higher level, the communication links differ in how messages are formatted and in the designation of the meaning of standardized messages," (lines 29-35 of column 1 in Keeley). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the internal media access control protocol selected from a group consisting of a DeviceNet protocol and a ControlNet protocol in the system as taught by Thibault and Stawikowski.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thibault, Stawikowski, Stevens and Keeley, in view of Kastner.

With respect to claim 11, Thibault and Stawikowski do not explicitly disclose that the control network communications program includes a second program for formatting

the socket API signal, as formatted in accordance with the internal media access protocol, also in accordance with a control network protocol.

Kastner teaches that HTTP can be used to transmit information between a control device and an operating unit (col. 6, lines 64-66). Thibault, Stawikowski, and Kastner are all analogous art because they are from the same field of endeavor of remote industrial control systems. At the time of invention, it would have been obvious that one could modify Thibault and Stawikowski's system to use HTTP to communicate between the control apparatus and the object manager, as taught by Kastner. The motivation for doing so would have been to allow Thibault and Stawikowski's system to exchange web-based data. Therefore it would have been obvious to combine Kastner with Thibault and Stawikowski for the benefit of exchanging web-based data to obtain the invention as specified in claim 11.

11. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thibault in view of Stawikowski and Stevens as applied to claim 1 above, and further in view of Kalajan.

With respect to claims 12 and 13, Thibault and Stawikowski do not explicitly disclose that the web access interface includes a table for converting IP address information to control network addresses corresponding to the plurality of control devices, and wherein, upon receiving the Internet signal at the web access interface, the web access interface determines the appropriate one of the control devices to

receive the socket API data based upon an IP address within the Internet signal and that the table converts at least one of IP addresses to control network addresses and IP addresses plus port addresses to control network addresses.

Kalajan teaches that a table can be used to convert IP address information to network resource addresses and to determine which device should receive the data (col. 2, lines 39-41, 45-48, and 50-52). At the time of invention, it would have been obvious to one of ordinary skill in the art to modify Thibault and Stawikowski's system to include a table within the server digital data processor to convert IP address information to network resource addresses and to determine which device should receive the data, as taught by Kalajan. The motivation for doing so would have been to provide a more efficient way to distribute information than the broadcast method Thibault's system uses. Therefore it would have been obvious to combine Kalajan with Thibault and Stawikowski for the benefit of more efficient information distribution to obtain the invention as specified in claims 12 and 13.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rapp et al. US 2002/0059467 A1 discloses a signal exchange module that receives signals from a control network and performs format conversion to make those signals available to a computer over a network (paragraph 37, Figs. 1-2).

Redpath et al. US 7,359,876 B1 discloses interconnecting media between the Internet and a non-TCP/IP network (col. 10 ln. 35-45).

Agrusa et al. US 2004/0024891 A1 discloses a process control system (abstract).

Wischinski US 6,801,920 B1 discloses a system for remote management of an industrial control system (abstract).

Fowler et al. US 6,714,977 B1 discloses a monitoring system that accepts control signals and can communicate over a network via a web based interface (abstract).

Williams et al. US 6,721,286 B1 discloses a method for device cooperation whereby different formats may be used via multiple communication stacks (abstract, col. 21 ln. 10-15).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON RECEK whose telephone number is (571)270-1975. The examiner can normally be reached on Mon - Fri 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Caldwell/
Supervisory Patent Examiner, Art
Unit 2442

/Jason Recek/
Examiner, Art Unit 2442
(571) 270-1975